

IN THE CLAIMS:

Claims 1, 2, 18, 19 and 20 are amended and new claims 21 and 22 are added. All amendments are made without prejudice or disclaimer and applicant may pursue such claims in related applications. Please note that all claims currently pending and under consideration in the referenced application are shown below. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) An isolated ~~biologically active human~~ phosphorylated ~~glyoxalase-I~~ polypeptide having protein methylglyoxal modifying activity.

2. (Currently Amended) The isolated ~~biologically active human~~ phosphorylated ~~glyoxalase-I~~ polypeptide of claim 1, wherein the isolated ~~biologically active human~~ ~~glyoxalase-I~~ polypeptide comprises an amino acid sequence of SEQ ID NO: 1.

3. (Withdrawn) A process for modulating methylglyoxal-modification of proteins, wherein the process is selected from the group consisting of:
phosphorylating a glyoxalase-I;
inhibiting phosphorylation of the glyoxalase-I;
producing a phosphorylation mutant of the glyoxalase-I; or
combinations of any thereof.

4. (Withdrawn) A process for modulating TNF induced cell death, wherein the process is selected from the group consisting of:
phosphorylating a glyoxalase-I;
inhibiting phosphorylation of the glyoxalase-I;
producing a phosphorylation mutant of the glyoxalase-I; or
combinations of any thereof.

5. (Withdrawn) A process for modulating stress induced cell death, wherein the process is selected from the group consisting of:

phosphorylating a glyoxalase-I;

inhibiting phosphorylation of the glyoxalase-I;

producing a phosphorylation mutant of the glyoxalase-I; or

combinations of any thereof.

6. (Withdrawn) The process according to claim 5, wherein the stress is oxidative stress.

7. (Withdrawn) The process according to claim 3, wherein the glyoxalase I is a mammalian glyoxalase I.

8. (Withdrawn) The process according to claim 7, wherein the mammalian glyoxalase I is mutated at amino acid residue 45 or 98 or at any other amino acid residue that affects phosphorylation.

9. (Withdrawn) The process according to claim 8, wherein the mutated amino acid residues are at position 45 or 98 of SEQ ID NO: 1.

10. (Withdrawn) The process according to claim 3, wherein the inhibitor is a PKA inhibitor.

11. (Withdrawn) A process for modifying glyoxalase I comprising:
phosphorylating the glyoxalase I with PKA.

12. (Withdrawn) A process for modulating methylglyoxal-modification of proteins in a cell comprising:
contacting the cell with a means for phosphorylating a glyoxalase I associated with the cell.

13. (Withdrawn) The process according to claim 12, wherein the means for

phosphorylating a glyoxalase I is selected from the group consisting of TNF, PKA, or combinations thereof.

14. (Withdrawn) The process according to claim 12, wherein the means for phosphorylating a glyoxalase I is TNF.

15. (Withdrawn) The process according to claim 12, wherein the glyoxalase I is mammalian glyoxalase I.

16. (Withdrawn) The process according to claim 12, wherein the glyoxalase I comprises an amino acid sequence of SEQ ID NO: 1.

17. (Withdrawn) The process according to claim 3, wherein the modulation of the methylglyoxal-modification of proteins occurs in a cell.

18. (Currently Amended) The isolated ~~biologically active human~~ phosphorylated ~~glyoxalase-I~~ polypeptide of claim 1, produced by the process comprising: treating a mammalian cell with TNF.

19. (Currently Amended) The isolated ~~biologically active human~~ phosphorylated ~~glyoxalase-I~~ polypeptide of claim 2, wherein the isolated ~~biologically active human~~ phosphorylated ~~glyoxalase-I~~ polypeptide is phosphorylated at one or more positions selected from the group consisting of Ser 8, Ser 21, Ser 26, and Thr 107.

20. (Currently Amended) The isolated ~~biologically active human~~ phosphorylated ~~glyoxalase-I~~ polypeptide of claim 2, wherein the isolated ~~biologically active human~~ phosphorylated ~~glyoxalase-I~~ polypeptide is phosphorylated at one or more positions selected from the group consisting of Ser 45 and Thr 98.

21. (New) An isolated phosphorylated polypeptide having glyoxalase I activity.

22. (New) The isolated phosphorylated polypeptide of claim 22, produced by the process comprising:
treating a mammalian cell with TNF.